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REHABILITATION SERVICES FOR THE PARAPLEGIC

by

Mary Frances Paula Vickers

This study examins the use which the paraplegic made of a rehabilitation center. It examins the quality of the paraplegic's rehabilitation program as a factor in his adjustment to his disability. This is an individual thesis written as part of a joint study done by five members of the 1969 class of the Maritime School of Social Work.

The data were obtained by questionnaires administered to twenty-three paraplegics registered at the Canadian Paraplegic Association, Atlantic Division, Halifax, Nova Scotia. Material relevant to the study was then extracted and summarized by 2x2 tables.

Contrary to expectation, attendance at a rehabilitation center did not appear to be a factor in the adjustment of the paraplegic. However, there appeared to be a relationship between the quality of the general rehabilitation program and adjustment. A good rehabilitation program consisted of good physiotherapy and counselling programs, as well as an overall favorable attitude toward the rehabilitation program. Each of these individual aspects of a good rehabilitation program correlated positively with adjustment. It was concluded that the quality of the program received was a factor in the adjustment of the paraplegic and some recommendations were offered in this regard.

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REHABILITATION SERVICES FOR THE PARAPLEGIC

The Way in which Rehabilitation Services Influence the Paraplegic's Adjustment to his Disability

A Thesis

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and

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by

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CHAPTER I

INTRODUCTION

This study is concerned with the effect of the rehabilitation program on the adjustment of the paraplegic. Paraplegia is the paralysis of the lower half of both legs due to disease or injury to the spinal cord. The person suffering with paraplegia is faced with a sudden change in living and each area of his functioning is affected. His locomotion and essential movements are impaired. The body image which he possessed is threatened and this may have an effect on the equilibrium of personality. Also, for a period of time, the paraplegic is removed from normal social experiences and work situations, which are two major sources of satisfaction. Rusk and Taylor (1949) stated that, "the severity of the disability of paraplegia and its overpowering psychological impact are such that each case represents individual physical, psychological, social and economic problems." (p. 170).

In most cases medical science cannot restore the degenerated nerves and make limbs useful and powerful again. Medical science is now interested in the problem of helping the paraplegic learn to live and work with what is left. Regardless of how handicapped the person may be, there is more ability than disability. Therefore, in order for the paraplegic to live the most useful and happy life possible, he must have a chance to train his abilities. He must be provided with opportunities to adjust to his new circumstances and obtain optimal conditions for living.

For purposes of this study adjustment will be defined as the process by which the person is able to establish a harmonious relationship between himself, situations, conditions and persons who comprise his physical and social environment. The well adjusted paraplegic will be positive and accepting of himself, display self-assured confident behavior, will possess stable motivation and will express no hostility. The poorly adjusted paraplegic will be hostile, dependent, timid, compulsive, will possess superficial self-confidence, unstable

motivation and will rationalize situations.

Adjustment is a process; it is not static. There are continuous changes in the person or in the environment which will affect the paraplegic's ability to cope with everyday living. For the paraplegic this implies that adjustment to the disability will take place over a period of time and this adjustment will be affected by things in his environment such as a rehabilitation program and the resulting internal changes which will occur within himself.

The literature defines rehabilitation as the restoration of the paraplegic to the fullest physical, mental, social, vocational and economic usefulness of which he is capable. This study will consider good rehabilitation as the paraplegic's attendance at a center where the necessary services are offered and the paraplegic has participated in these services and found them beneficial. Poor rehabilitation will be considered to be attendance at a center where the necessary services are either not available or are not used by the paraplegic or the program is not considered to have been of benefit by the paraplegic.

Rehabilitation is a relatively new concept. Less than thirty years ago little or nothing was done to help the paraplegic. Jousse (1963) has stated that the mortality figures for paraplegic patients have been reversed since World War II, for "prior to the war the mortality was as high as 80% in a few years and in the present group survival of over 80% has been recorded in more than a decade." (p. 8)

Since World War II, rehabilitation centers have developed throughout the country, and there have been continual efforts made to improve these centers to aid the paraplegic in rehabilitation. Rehabilitation centers are places where groups of professional people in different fields work together as a team to help disabled people in every possible way. The captains of the professional teams are psychiatrists. They are aided by consulting physicians in many specialties, rehabilitation nurses, physical therapists, psychologists, social workers and vocational counsellors. This paper will discuss what the literature has suggested as a good rehabilitation program.

The rehabilitation process should be followed

after the patient's admission to a general hospital. After a neurological assessment is given to form an accurate prognosis, the doctor involved with the patient should make known to the patient the extent of his disability. After the necessary medical and surgical measures have been completed, the patient should be transferred to a rehabilitation unit. Medical and surgical care alone does not determine success in the adjustment to paraplegia. All members of the team have important contributions to render at varying stages of treatment.

It has been stressed "that treatment begin as soon as possible in the rehabilitation hospital." (Anonymous, 1965, p. 1) Once in the rehabilitation unit, the paraplegic begins a program of restorative activity with the physical therapists. The aim of the program is to render the paraplegic mobile and personally independent. This is achieved through reconditioning exercises and the practice of requisite skills. The program aids the paraplegic to master the activities of daily living such as getting in and out of bed, dressing, feeding, control and elimination of bladder and bowel, use of crutches, wheelchair and other adaptive aids. Jousse (1963)

has stated that "These achievements are requisite if the paraplegic hopes to return to the community and live outside of an institution without having nursing and orderly care." (p. 390)

Often after disability, the patient is not able to return to his former employment and is uncertain as to what type of work he would like to do. At the same time he is often uncertain of his capacities and potential. The assistance of a psychologist may be invaluable at this point. By means of his testing techniques the psychologist is able to assess the intellect, aptitudes and interests of the patient. After a study of vocational re-establishment of patients, Geisler, Jousse and Wynne-Jones (1966) concluded, "The psychologist very often aided the patient in the achievement of a satisfactory emotional adjustment to life situations, particularly in the light of his state of disablement. Better attitudes and feelings frequently resulted." (p. 699)

The patient, with the aid of a psychologist is often able to discover new areas of employment in which he has an aptitude and interest. At this point a vocational counsellor may be very helpful in

informing the patient which areas of employment are available to him. The areas into which he may wish to seek employment are often limited because of his disability and often the patient may not be qualified for such employment because of inadequate training. Very often the vocational counsellor will advise the patient to return to school if failure is not to follow. Thus a vocational counsellor, if further educational and vocational needs are required, will plan with the paraplegic a retraining program which is acceptable to the patient, yet realistic in terms of the patient's capacity to benefit from education. Once the course of training has been decided upon, whether it is an upgrading course, further academic training or training on the job, the necessary administrative steps must be taken and the candidate enrolled. When training is completed, the patient is referred to a Special Service Officer at Canada Manpower for placement in employment.

The continual goal of the whole rehabilitation program is to re-establish the paraplegic in his home and in the community in such a way that the paraplegic may come to lead an independent life

in the physical, social and economic spheres. To achieve this independence the patient often requires much encouragement, support and counselling. The social worker has an important role in this area. The patient often has concerns about wife and family, and the social worker may become involved in obtaining welfare benefits and resolving domestic concerns. The social worker will also be largely responsible for altering the social and psychological environment into which the patient will return so that it will be accepting of the disabled person. Social attitudes toward the disabled may require changing. The attitudes of friends, relatives, employees and associates at work may require modification if the casualty is to be accepted as a person, albeit with a physical disability, rather than being rejected as a cripple. The worker is also responsible for supplying the necessary equipment needed by the patient and also for discharge planning.

As previously mentioned, the program described above is what the literature suggests to be a good rehabilitation program. In fact, rehabilitation centers differ from one another for

various reasons. Services offered in varying centers may differ due to the resources available to the center such as funds, space, staff, the philosophy of the center, it's director and the emphasis placed on the various areas of treatment.

This study wishes to look at whether attendance at a rehabilitation center is related to the adjustment of the paraplegic to his disability. Although the rehabilitation program described earlier in this paper is ideal and would appear to enhance the total functioning of the paraplegic, the quality of the centers attended by the paraplegic in this study is not known. At the same time, with knowledge of the purpose of the rehabilitation programs, one would expect a relationship to exist between attendance at a rehabilitation center and adjustment.

Furthermore, because it would appear that centers differ in their programs and that individuals vary in their participation in programs, this study wishes to look at the usefulness of the program to the paraplegic as viewed by the paraplegic. This study is not looking at the quality of the rehabilitation program offered by the centers in themselves.

Rather it will look at the usefulness of the program as viewed by the patient. One would expect that the quality of the program received would have a relationship with the adjustment of the paraplegic to his disability.

It would also be interesting to look at different aspects of the program. This study will look at two parts of the rehabilitation program individually, the physiotherapy program and the counselling program. The physiotherapy program works with the physical disability and is concerned with the patient's mastery of the activities of daily living. The physical disability is not the only problem the paraplegic encounters. Often the disability is accompanied by upsets in the individual's social, economic and emotional functioning. The center is staffed with professional people in the counselling program who are trained to aid the paraplegic with these problems. Thus it would be expected that the more involved the patient becomes in the programs, the better the quality of the program received, and the more likely will he become adjusted.

As attitude is defined as the persistent

disposition to act either positively or negatively toward the program it would be expected that the paraplegic's attitude toward the program would have a relationship with adjustment.

CHAPTER II

METHODOLOGY

In this study the population consisted of all paraplegics who lived and worked in the cities of Halifax and Dartmouth or in a radius of thirty miles of this area, registered at the Canadian Paraplegic Association, Atlantic Division, Halifax, Nova Scotia, who met the following criteria:

1. The paraplegic had to be disabled after sixteen years of age. This age was chosen as the person should have formed some stability of personality and the disability would require a readjustment to his life situation.
2. The paraplegic had to be disabled for a period of two or more years. As adjustment is a process, it was felt that two years would allow adequate time for the individual to make an adjustment to his disability.

The entire population consisted of thirty-one paraplegics. Of these, twenty-three parapleg-

ics were interviewed, five refused to be interviewed and three were too ill to be interviewed. Thus the high refusal rate of twenty-five per cent and the small sample were limitations of the study. In line with these limitations, inferences to the general population of paraplegics will not be made. Instead, this study will be a pilot project, one which will seek information about factors which influence the adjustment of the paraplegic to his disability.

This study is part of a joint project done by five students on factors which affect the adjustment of the paraplegic. This study is concerned with rehabilitation as a factor in the adjustment of the paraplegic to his disability. A section of the questionnaire was devised to measure adjustment and each student devised questions to measure the variable which they felt affected the adjustment of the paraplegic to his disability.

To measure the adjustment of the paraplegic, ten questions were devised from the four indicators of adjustment. (See Appendix A). Four questions were on the acceptance of disability by the

paraplegic, two on the acceptance of the paraplegic's disability by others, two on the paraplegic's dependence on others and two on emotional optimism. These then combined to form an index of adjustment with each question being worth one point. (See Appendix B for more details). Four questions were asked on the paraplegic's acceptance of his disability. This was weighted twice as much as the others since it is most important that the paraplegic accept his own disability.

The range of scores of adjustment was from 5 to 10. The mean of eight was used as a cutting point to divide the sample into two groups. Those with a score of 8 or above were considered adjusted and those with a score of 7 and below were considered maladjusted.

To measure the quality of the rehabilitation program questions were designed to measure three general aspects of it; the quality of the physiotherapy program, the quality of counselling services received, and the attitude of the paraplegic toward the program.

In order to measure the quality of the physiotherapy program questions were asked on the

amount of time spent in physiotherapy and the benefit derived from the program. A score of 48 was possible, and the scores ranged between 10 and 48. A mean of forty-three was established as the cutting point to divide the sample into two groups; those with a score of 43 and above were considered to have had a good physiotherapy program; those of 42 and below a poor physiotherapy program.

In measuring the attitude of the paraplegic toward the rehabilitation program, two questions were asked on the benefit of the program for the paraplegic. A possible score for these questions was 12. The range of scores was 3 to 12. The mean of nine was used as the cutting point to divide the sample into two groups. Those with a score of 9 and above were considered to have had good attitudes toward the program, and those with a score of 8 and below were considered to have poor attitudes toward the program.

To measure the quality of the counselling services received, seven questions were asked concerning the services offered to aid the paraplegic in

need of vocational re-establishment, personal counselling, family contact, discharge planning and continued contact once discharged. The questions generally measured the availability for counselling, the frequency of contact and the benefit derived from the service. The possible score for the counselling section was 36. The range of scores fell between 0 and 36. A mean of twelve was established as a cutting point. Those with 11 or below were considered to have received poor or no counselling. There was a wide range of scores, thus a mean of twenty-four was established as a cutting point among those scoring between 12 and 36. Those with a score between 12 and 23 were considered to have received fairly good counselling; those with scores between 24 and 36 were considered to have received good counselling.

To measure the general quality of the rehabilitation program the concepts of physiotherapy, attitude and counselling were combined to form an index. Possible scores of 48 could be gained in physiotherapy, 36 in counselling and 12 in attitude toward the program. Thus a total score of 96 was possible for rehabilitation. The means of each

concept were combined, 9 for attitude, 43 for physiotherapy and 12 for counselling to arrive at an arbitrary cutting point of 64 for rehabilitation in general. Those with scores of 64 and above were considered to have received a good rehabilitation program; those with a score of 63 and below were considered to have received a poor rehabilitation program.

Arbitrary weights were given to measure concepts of physiotherapy, counselling and the attitude of the paraplegic toward the program. The rehabilitation program can be divided into two general areas; that of the physiotherapy and counselling services. As the physiotherapy program is concerned with restoring the paraplegic to his highest capacity in physical functioning, this program is of the utmost importance to the patient. Thus a score of 48, half of the total scoring for the program, could be scored by this concept. As the disability of paraplegia is most often accompanied with personal, social and economic problems, counselling which deals with these problems, was considered to be another important aspect of the program. Thus a score of 36 was given in the

measurement of this concept. As attitude is defined as the persistent disposition of the paraplegic toward the program, one would expect that attitude would have an influence on the quality of the program received by the paraplegic. Thus a score of 12 was given for this concept.

In regard to this questionnaire no tests of reliability were used but reliability can be considered quite high as the questionnaire was highly structured. A good number of the questions were of the fixed-alternative type which required a response to fit a category. Although this probably increased reliability it may have produced a bias since some people may tend to respond to extremes and others to the middle categories. This may have been the case with some respondents in this study and because of this the validity of the study may be questioned. However, several questions were asked to measure one concept which usually increases validity; furthermore, when answering more than one question measuring one concept, there appeared to be no contradictory answers given by the inter-

viewees. The coding procedures were explicit and relatively straightforward, and so it is expected that the reliability of coding is quite high.

The mean was used as a cutting point to form two groups of subjects; maybe more than two groups of subjects may have been needed. Also the mean may not have been the most appropriate cutting point. For example, all subjects could have received good rehabilitation, but the mean or cutting point may have distorted the quality of the concept measured. Some of the arbitrary weights are difficult to justify.

While there is apparently good reliability in this study, the validity is lower than desirable. Furthermore, the sample is very small and the coding categories are very broad and somewhat arbitrary.

CHAPTER III

RESULTS

This study is concerned with whether there are factors which influence the paraplegic's attendance at a rehabilitation center. Among the twenty-three paraplegics interviewed, fifteen had attended a rehabilitation center and eight had not attended.

Rehabilitation centers began to flourish after 1945, and they were established in different areas of the country at different dates. Often a paraplegic was disabled at a date in which a rehabilitation center was not available in the area in which he lived and it was necessary for him to attend a center in another area. Among the fifteen who attended rehabilitation centers, ten attended Lyndhurst Lodge in Toronto, two attended rehabilitation centers in New York and three attended the Halifax Rehabilitation Center which was started in 1953.

TABLE I

THE RELATIONSHIP BETWEEN ATTENDANCE AT A REHABILITATION CENTER AND DATE OF DISABILITY

	Rehabilitation Program	No Rehabilitation Program	Total
After 1945	11	4	15
Prior 1945	4	4	8
Total	15	8	23

In the interviews, it was mentioned several times that date of disability was a factor in attendance at a rehabilitation center. As mentioned previously, rehabilitation centers began to flourish after 1945. Thus those disabled prior to 1945 would be less likely to have attended a rehabilitation center than those disabled after 1945.

Fifteen were disabled after 1945 and eight were disabled prior to 1945. Among the fifteen disabled after 1945, eleven or 73% attended a rehabilitation center, while among the eight dis-

abled prior to 1945, four or 50% attended a rehabilitation center. Thus those disabled prior to 1945 would be less likely to have attended a rehabilitation center than those disabled after 1945.

TABLE II

THE RELATIONSHIP BETWEEN THE ADJUSTMENT OF PARAPLEGICS AND ATTENDANCE AT A REHABILITATION CENTER

	Rehabilitation Program	No Rehabilitation Program	Total
Adjustment	8	4	12
Maladjustment	7	4	11
Total	15	8	23

This study is concerned with whether the paraplegic's use of existing rehabilitation services aid the paraplegic in his adjustment to his disability. With knowledge of the purpose of the rehabilitation center, one would expect to find a relationship between attendance at a rehabilitation center and adjustment. However, in Table II, there does not appear to be this relationship. Of the fifteen who attended a rehabilitation center, eight were adjusted and seven were maladjusted. Of the eight who had not attended a rehabilitation center, four were adjusted and four were not adjusted.

Attendance at a rehabilitation center does not seem to have aided adjustment, but some clue to factors influencing adjustment might be provided by looking at those seven individuals who attended a rehabilitation center but were maladjusted. In some cases, these individuals had received a poor physiotherapy program, poor counselling or had a poor attitude toward the program. It was also noticed that in some cases a relatively poor education was received prior to disability. Thus factors both internal and external to the rehabilitation program might be involved in the adjustment of the paraplegic.

TABLE III

THE RELATIONSHIP BETWEEN THE ADJUSTMENT OF PARAPLEGICS AND THE QUALITY OF THE REHABILITATION PROGRAM

	Good Rehabilitation	Poor Rehabilitation	Total
Adjustment	7	1	8
Maladjustment	2	5	7
Total	9	6	15

It has been mentioned previously that there would appear to be a difference in the quality of services offered by the various centers. Also, regardless of services offered by the centers, some individuals would participate more in the program than others. In this study, a good rehabilitation program will be considered as attendance at a center where the necessary services are offered and the paraplegic has participated in these services. Thus it would be interesting to note if the quality of the program received by the individual had a

relationship with the adjustment of the paraplegic to his disability.

As shown in Table III, a definite relationship exists. Of the six who received a poor rehabilitation program, only one was adjusted and of the nine who received a good rehabilitation program, seven were adjusted and only two were maladjusted. Of these two deviant cases who had received a good program but were maladjusted, one had a low self-identity and the other had marital problems. Furthermore, both had poor counselling despite an otherwise good program and so these problems were not cleared up. These other factors might have counteracted the influence of an otherwise good rehabilitation program.

TABLE IV

THE RELATIONSHIP BETWEEN THE ADJUSTMENT OF PARAPLEGICS AND THE QUALITY OF THE PHYSIOTHERAPY PROGRAM

	Good Physiotherapy	Poor Physiotherapy	Total
Adjustment	6	2	8
Maladjustment	3	4	7
Total	9	6	15

It appears that attendance at a good rehabilitation program is a very important key to a good adjustment. As there are various areas of emphasis in the treatment of paraplegia, it would be interesting to look at the two broad areas of treatment, the physiotherapy program and the counselling program.

As the physiotherapy program is concerned with the patient's mastery of the activities of daily living, its importance cannot be stressed enough. This study would expect to find that those with a good physiotherapy program would adjust better

than those with a poor program and this expectation is realised. Of those who received a good physiotherapy program, six out of nine or two-thirds were adjusted, and of those who received a poor physiotherapy program, four out of six or two-thirds were maladjusted. It would then appear that there is a relationship between the quality of the physiotherapy program received and adjustment.

TABLE V

THE RELATIONSHIP BETWEEN THE ADJUSTMENT OF PARAPLEGICS AND THE QUALITY OF COUNSELLING

	Good Counselling	Fair Counselling	Poor Counselling	Total
Adjustment	3	2	3	8
Maladjustment	0	1	6	7
Total	3	3	9	15

There is not only the physical disability itself to be considered but also the psychological impact of the disability which may have a staggering impact on the paraplegic. The resulting upset in his emotional, social and economic functioning is paramount. It is felt that services offered by a team of professionals, who are skilled to aid the patient in the problems he is faced with, can be an important factor in the patient's adjustment to paraplegia. Thus it was felt that the quality of counselling services was important and this is

clearly demonstrated in Table V. Of the three who received good counselling all were adjusted and of the three who received fair counselling two-thirds were adjusted; of the nine who received poor counselling only one-third was adjusted. The findings from the above table would suggest a relationship between quality of counselling received and the adjustment of the paraplegic.

In interviewing the nine who received poor counselling, it was often mentioned that they were not sure if these services were available; others stated that they hesitated to approach the professionals for help needed. Thus it appears that the overall use of counselling was not as good as it should have been.

TABLE VI

THE RELATIONSHIP BETWEEN THE ADJUSTMENT OF PARAPLEGICS AND THE QUALITY OF ATTITUDE TOWARD THE PROGRAM

	Good Attitudes	Poor Attitudes	Total
Adjustment	8	0	8
Maladjustment	3	4	7
Total	11	4	15

It was also felt that adjustment would be much influenced by the attitude of the paraplegic toward the rehabilitation program. For purposes of this study, attitude will be defined as the persistent disposition to act either positively or negatively toward the program. It was felt that those with a good attitude toward the program would be likely to participate and become more involved in the services, thus getting more from the program than those with poor attitudes. Thus it would seem likely that a relationship would exist between adjustment and attitude toward the

program.

As shown in Table VI, of the eleven who had good attitudes, eight were adjusted; all four who had poor attitudes toward the program were maladjusted. There were only three who did not fit into the predicted pattern. This may have been the result of the poor counselling they received and personal problems. There would then appear to be a relationship between adjustment and attitude toward the program.

TABLE VII

THE RELATIONSHIP BETWEEN ADJUSTMENT AND EDUCATIONAL LEVEL ACHIEVED PRIOR TO DISABILITY

	Adjustment	Maladjustment	Total
Post University	1	0	1
University	1	0	1
Partial University	1	0	1
High School	6	5	11
Elementary	3	6	9
Total	12	11	23

So far, the quality of aspects of the rehabilitation program, as well as the program in general, appear to have a relationship with adjustment. However, there are other factors inherent in the individual which may be important. In the first part of this chapter, it was mentioned that

several of the deviant cases who attended a rehabilitation center but were maladjusted had achieved only a low educational level. It would be interesting to look at the importance of that one factor.

The product of education is the totality of knowledge, skills, and competence of qualities of character gained by a person through an educational system. It would then seem likely that the higher the educational level achieved prior to disability, the more readily the individual could learn at a rehabilitation center. Thus one would expect that the higher the educational level attained prior to disability the more likely the patient will adjust.

This appears to be the case. All three with a university education were adjusted; of the eleven who had completed high school, six were adjusted and five were maladjusted; of the nine who had completed elementary school only three were adjusted. Since this relationship between adjustment and education attained prior to disability seems to exist, it is possible that other factors external to the rehabilitation process itself may also be important. However, they are beyond the scope of this study.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

The literature written on paraplegia suggests that the disability of the paraplegic affects the total functioning of the individual. There is not only the physical disability itself to be considered, but also the social, economic and emotional upsets which accompany the disability. For adjustment to be effective, all areas of the individual's functioning must be dealt with. This study looked at the rehabilitation program as a factor in the overall adjustment of the paraplegic. The quality of the program received by the paraplegic was measured in terms of the usefulness of the program, as seen by the paraplegic. The objective quality of service offered by the centers was not measured and was beyond the scope of this study.

Contrary to expectation, attendance at a rehabilitation center did not appear to have a relationship with adjustment in this study. However, there did appear to be a relationship between the quality of the rehabilitation program received and adjustment. The quality of the program was

determined by good physiotherapy and counselling programs, as well as by an overall favorable attitude toward the rehabilitation program itself. The first two dimensions of good rehabilitation were suggested by accounts of ideal rehabilitation programs in the literature. The third was included because attitude influences the degree to which the patient participates in the program and indirectly influences the quality of the program received.

The individual aspects of the rehabilitation program were all influential in the adjustment process. There appeared to be a relationship between adjustment and the quality of service obtained in both physiotherapy program and the counselling program; attitude was also related to adjustment.

Because the sample in this study was small, inferences could only be made with caution. Further studies should be done with a larger sample. It is also suggested that further research be done on the centers themselves and on the effectiveness of the services offered by the various centers.

On the basis of the rehabilitation literature, this study recommends that the teamwork approach of offering services to patients be adopted. The teamwork approach appears to give attention to

the physical, economic, social and emotional functioning of the individual, and hence it is probably the most successful method of rehabilitation in the total sense. This recommendation is made on the basis of the current philosophy of rehabilitation and awaits empirical confirmation of its greater effectiveness.

From some of the findings in this study it is apparent that some patients are not sure if counselling services are available; others hesitate to approach the counselling professionals for needed help. This study suggests that the procedure of having a patient referred to a professional person for counselling is inadequate. It recommends that the team move onto the ward and become more accessable to patients.

For the profession of social work in particular, this would imply that social workers spend a considerable amount of time on the ward. This would enable them both to be more aware of the problems being encountered by the patients and more readily available to the patients if help is required. By being on the ward, the social worker would be able to become more familiar with the individual patients and with the problems they normally

encounter such as financial worries, domestic concerns, occupational and emotional upsets. Also by becoming acquainted with patients on an individual basis, they would become aware of personal problems unique to each patient. In addition to the advantage of becoming more familiar with patients and their problems, social workers on the ward would be more accessable to the patient. If the paraplegic is familiar with the social worker, he would be aware of the role of the social worker and of the help he may receive from the worker. Furthermore, he may not be so hesitant in approaching the worker for needed help.

APPENDIX A

PARAPLEGIC QUESTIONNAIRE:

I hope you will not mind answering these questions even though you may not now be able to see how some of them can be of any value.

As you remember from the letter you received, everything you tell me will be regarded as completely confidential.

1. When were you born?________________

2a) What grade in school did you complete prior to your disability?

Elementary ________________

High School ________________

Technical ________________

Partial University __________

University ________________

Post University________________
on job-training ________________

b) Did you further your education after disability?

Elementary ________________

High School ________________

Technical ________________

Partial University __________

University ________________

Post University________________
on job-training ________________

c) Are you now using this training? __________

3. Under what circumstances were you disabled?

4. When did that happen? ____________________

5a) Where did that happen? __________________

b) Were you living at home at the time? __________

6. Where were you hospitalized? ______________________

7. How long were you in hospital?____________________

8a) Did you attend a rehabilitation center? Yes______No______
(If no) answer only the following questions: #11, 12, 14a)

b) (If yes) What was its name? ________________

c) Where was it?______________________

d) How long were you there? __________

9. What part, or parts, of the rehabilitation program did you find most helpful?

10. What areas do you see for improvement in the rehabilitation program that you had? Any others?

11. At the time of your hospitalization, did a doctor make clear to you the extent of your disability? Yes _______No ________

12. At this time, was it explained to you the treatment you could receive through a Rehabilitation program? Yes ______No______

13a) Do you feel that the physiotherapy program was extensive enough to provide you with the ability to cope with the activities of daily living? Yes______ No________

b) How much time did you spend in physiotherapy? (Over what period of time and how many hours each day?)

c) Did you find the physiotherapy program -

very helpful __________________

somewhat helpful ______________

not very helpful ______________

not helpful at all ____________

14a) Were you able to return to your former employment? Yes______No______
(If yes, skip to question 16a)

b) (If no) was a vocational counsellor or another member of the staff available to discuss with you other possible areas of employment? Yes ______No_______

c) Did you discuss these possibilities with him? Yes______ No________

d) (If yes) How often were you in contact with him? _________

e) Did you find your contacts with the counsellor to be -

very helpful _______________

somewhat helpful _____________

not very helpful _____________

not helpful at all ___________

15a) Was a social worker or another staff member available to help you with making arrangements for an upgrading course, vocational training or on-the-job training? Yes ______No______
(If no, skip to question 16a)

b) How often were you in contact with the worker in making future plans?______

c) Did you find his services -

very helpful_______________

somewhat helpful _____________

not very helpful______________

not helpful at all____________

16a) Was a psychologist available to help you discover your aptitudes and interests? Yes_______No_______
(If no, skip to 17)

b) How often were you in contact with the psychologist?_____________

c) (If contact) was he able to help you with your problems?

Was he - very helpful_____________

somewhat helpful_________

not very helpful_________

not helpful at all________

d) What problems were these?

17a) Was a social worker or rehabilitation officer in contact with your family during your stay in hospital or in the rehabilitation center?
Yes_______No_______
(If no, skip to question 18).

b) How often was the worker in contact with your family and over what period of time?

c) Did you find this service to be helpful to you?________

Did you find it - very helpful___________

somewhat ___________

not very helpful________

not helpful at all_______

18. When you had completed the rehabilitation program, were you referred to a Placement Officer at Canada Manpower or National Employment Service for job placement or did a Rehabilitation Officer help in finding a job?

19a) Was counselling available to help you move back into the community once the program was completed? Yes_______No_______
(If no, skip to question 20)

b) Did you discuss this problem with the Rehabilitation Officer?

c) How often were you in contact with the officer?___________

d) Generally, did you find this service -

very helpful______________

somewhat helpful___________

not very helpful___________

not helpful at all__________

20. After your return to the community, was a rehabilitation officer in frequent contact with you? Yes_______No_________

21. Was equipment, needed for treatment, made available to you at the Rehabilitation Center? Yes_______No_______

[illegible] everything into account, was your Rehabilitation program helpful to you in your re-adjustment to the community? Was it - very helpful_____ somewhat helpful_____ not particularly helpful_______ not helpful at all______

Well, you certainly have been through a lot.

23. Personally, how do you feel you are getting along compared to other groups of people in society?______________________________

24. Which group, or groups, of people do you feel are getting along better than yourself?______________________________

25. Which group, or groups, of people are getting along worse than yourself?

____

PERSONAL AFFLICTION:

26. Compared to the blind, do you feel that you are better off, worse off, or about the same?

27. Compared to chronic heart patients, do you feel that you are better off, worse off, or about the same?

28. Compared to epileptics, do you feel that you are better off, worse off, or about the same?

SOCIAL:

29. Compared to Negroes (North American Indian if respondent is Negro) do you feel that you are better off, worse off, or about the same?

30. Compared to immigrants, do you feel that you are better off, worse off, or about the same?

31. Compared to alcoholics, do you feel that you are better off, worse off, or about the same?

ECONOMIC:

32. Compared to people who have no source of income, do you feel that you are better off, worse off, or about the same?

33. Compared to garbage collectors, (cleaning women, for female respondents) do you feel that you are better off, worse off, or about the same?

34. Compared to labourers (women in factories for female respondents) do you feel that you are better off, worse off, or about the same?

Now I would like to ask you a few questions about everyday living.

35. Do people do things for you because you are a paraplegic that you could do yourself?
    a) always
    b) sometimes
    c) never

36. Do you think your presence makes people feel uncomfortable?
    a) always
    b) sometimes
    c) never

37. Do you let people do things for you that you can do yourself? a)always
b)sometimes
c)never

38. Do you rely on others for comfort and guidance? a) always
b) sometimes
c) never

39. Do you feel uncomfortable when someone looks at you? Yes_____ No______

40. Do you feel limited in what you can do because of your condition? a)always
b)sometimes
c)never

41. Do you daydream about having the use of your legs again? a) always
b) sometimes
c) never

42. Most of the time, do you feel life is worth living? Yes_____ No______

43. Taking things all together, how would you say things are these days. Would you say you're very happy, pretty happy, or not too happy these days?

Very happy
Pretty happy
Not too happy

44. Compared with your life today, how were things before your disability. Were things happier for you then, not quite as happy, or what?

Happier
Not quite as happy
About the same
Other (specify)

This is going to be a little tough for you, but could we go back to the time before you were disabled and talk about friendships.

Coding Contacts

(1) Daily
(2) Several times a week
(3) Once a week
(4) Once every 2 weeks
(5) Once a month
(6) Once every 2 months
(7) Once every 6 months
(8) Once a year
(9) Less than
(10) Never

Code for type contact

Per - personal

P - phone
L - letter

Before Column A	Before B	Before C	0 - e years period in Hosp. D	0 - 2 years period in Hosp. E	Present H
In the year before you became a paraplegic, who were your friends? Underline 3 closest.	How often did you see or hear from______ by phone or letter? (Code above)	What activities did you do with______?	While you were in the hospital, how often did you see or hear from______?	While in the hospital, what did you do with ______?	(PAGE 2 FIRST) Now, at the present time, how often do you see or hear from______? (Code above go back to A)
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )
	Per.( ) P.L.( )		Per.( ) P.L.( )		Per.( )P.L.( )

NEXT PAGE CONT. F G (RETURN TO PAGE 2 COLUMN I)

<u>Coding Contacts</u>

(1) Daily
(2) Several times a week
(3) Once a week
(4) Once every two weeks
(5) Once a month
(6) Once every 2 months
(7) Once every 6 months
(8) Once a year
(9) Less than
(10) Never

<u>Code for type contact</u>

Per - personal
P - phone
L - letter

0 - 2 years period in hosp. Column F	0 - 2 yrs. period in hospital. G	Present I	Present J	Present K	Present L
During your stay in Hospital, who were your friends?	How did you see or hear from______ (CODE ABOVE)	(PAGE I FIRST) How often do you see or hear from______? (CODE ABOVE)	Who are your present friends? (Underline 3 closest).	How often do you see or hear from______ (CODE ABOVE)	What activities do you do with ______?
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	
	Per( ) P.L.( )	Per( ) P.L.( )		Per( )P.L.( )	

Now I would like to ask you some questions about your married life.

46. At the present time, are you single______? married______?separated________?

divorced________? widowed__________?

(If single, skip to question 67)

47a) When were you married?____________

b) Was this before your disability occurred?____________
(If no, do not ask following questions)

48. (If yes) Many paraplegics have difficulty in re-adjusting to family life, I am interested in how you and your wife/husband were able to get along especially during the years immediately following your disability?

Generally speaking, what problems did you have?

49. How have you been able to resolve these problems?

50. Were you a breadwinner for the family before your disability occurred?
Yes_____No_______

51. How hard was it for you and your wife/husband to reach a satisfactory decision about providing income for the family?
a) very hard
b) somewhat hard
c) not too hard
d) not hard at all

52. While in hospital, did you feel that your wife/husband was participating in enough social events? Yes______No______

53. When you returned home from hospital, were the two of you able to go out for a social evening as often as you wished? Yes______No______

54. (If no) was this a problem for you at that time? Yes____No____

55. How great a problem?
a) very serious
b) somewhat serious
c) not too serious
d) not serious at all

56. How long did it take to get it solved?
a) very short time
b) somewhat short time
c) somewhat long time
d) very long time
e) still present

57. Did your disability affect the recreational activities in which you and your wife/husband participated? Yes_____ No______

58. (If yes) how hard was it for you and your wife/husband to make changes in your recreational habits which were satisfactory to both of you?
    a) very hard
    b) somewhat hard
    c) not too hard
    d) not hard at all

59. Did you and your husband/wife find it difficult to re-adjust to each other sexually? Yes_______ No_______

60. (If yes) within three or four years following disability, do you think the two of you had solved the conflicts in this area? Yes______ No_______

61. Do you feel that your husband/wife gave you the support and encouragement that you needed?
    a) While you were in hospital? Yes_____ No_____
    b) Upon your return home? Yes_____ No_____

62. Did your partner visit as often as was realistically possible? Yes___ No____

63. How often did he/she visit?____________________________________

64. Did you feel that was enough? Yes________ No_____

65. As a rule, did you look forward to visits from your husband/wife? Yes___ No_____

66. At the present time, are any of the following items considered by you or by your husband/wife to be problem areas:

    a) Major breadwinner for the family? Yes_____ No_____

    b) The number or kinds of social activities? Yes _____ No_____

    c) Sexual satisfaction? Yes_____ No_____

These questions on general background are the last ones we would like to ask you.

67a) What was your (a) occupation and (b) income at time of disability?

    a) _______________

    b) _______________

b) (If job) how long had you held that job?___________________

c) (If none) what are the reasons for your not working?
 a) in school
 b) did not try
 c) tried but not job
 d) no financial need
 e) other (specify)

68a) What is your job history from the time after your disability to the present? (according to the following chart).

Date From - To	Occupation	Describe Position	Income (Range)	Reason for Change

 a) advancement
 b) more money
 c) unsatisfied
 d) new interest
 e) seasonal employment
 f) disability
 g) others (specify)

b) (If not working now) what are the reasons for your not working now?

 a) in school
 b) did not try
 c) tried but no job
 d) no financial need
 e) physically unable (i.e., special problems)
 f) other (specify)

69a) Prior to disability:

What was your parent(s) or guardian(s) 1) occupation and 2) income?

1) ____________________

2) ____________________

b) If married, what was spouse's 1) occupation and 2) income?

1) ____________________

2) ____________________

70a) At the present time:

What is your parent(s) or guardian(s) 1) occupation and 2) income?

1) ____________________

2 ____________________

b) If married, what is your spouse's 1) occupation and 2) income?

1 ____________________

2 ____________________

71. Before disability, what was your total income and source per year?

Amount	
	Job
	Welfare
	Parent
	Spouse
	Other (specify)

72. Now what is your total income and source per year?

Amount	
	Job
	Disability pension
	Workmen's Compensation
	Welfare
	War Allowances
	Parents
	Spouse
	Others (gift, etc. (specify)

Thank you very much. You have been most helpful.

December, 1968.

APPENDIX B

<u>Coding and scoring procedure for measuring adjustment:</u>

Questions 35 to 42 were used to measure adjustment. (See Appendix A) There were three possible answers to the questions. One point was given for the middle reply of "sometimes"; no points for the extremes of "always" or "never".

Question 39 and 42 had two possible answers. For number 39 a response of "no" earned one point, and for number 40 the same value was given for the response "yes". Question number 43 offered three choices. A response to either the first or second earned one point. Number 44 was scored one point for either the second or third response.

A possible score of from 0 to 19 could be gained. The actual range was from 5 to 10. A mean of eight was established and was used as the cutting point. Those with a score of eight or above were considered to be adjusted; those with a score of seven or below were considered non-adjusted.

<u>Coding and scoring procedures for measuring a good Rehabilitation Program:</u>

To measure the quality of the rehabilitation

program, questions were designed to measure the following aspects of the program: the physiotherapy program received; the counselling services received; and the attitude of the paraplegic toward the rehabilitation program.

In scoring the attitude of the patient toward the rehabilitation program, questions 9 and 22 were used. Question 9 was an open ended question, which asked the paraplegic for the areas that were most helpful in the rehabilitation program. A score of three was given to each of the following replies of physiotherapy and counselling. Thus a possible score of six could be given for this question, as each area is considered a vital part of the program.

There were four possible answers to question 22, which asked the benefit derived from the program. A score of six was given to a response of very helpful, a score of four points for a response of somewhat helpful, a score of two points for not particularly helpful and a score of zero for not helpful at all. Two points were scored for each degree the program became more beneficial.

Thus a possible score for the two combined questions, 9 and 22, was twelve. The range of

scores for attitude was 2 to 12. A mean of nine was established and was used as a cutting point. Those with a score of nine and above were considered to have good attitudes toward the program; those with a score of eight and below were considered to have poor attitudes toward the program. The mean was used to divide the sample into two groups.

To measure the quality of the physiotherapy program received, question 13 was asked consisting of three parts. Section A, requiring a response of either "yes" or "no", questioned the effectiveness of the program to aid the paraplegic in the activities of daily living. A response of "yes" received a score of eight, as it indicated that the program had been beneficial; a score of zero was given to a response of "no", as it was felt that the program had not been beneficial.

Section B measured the amount of time spent on physiotherapy. It was felt that the greater the amount of time spent in this area, the more skilled one would be in the activities of daily living. A score of ten was given if the response was 4 to 8 hours daily, as this would appear to be an adequate amount of time to be spent in this area. A score of five was given to a response of 2 to 4 hours daily, as this indicated only a minimum amount

of time was spent in this area. A score of zero was given to a response of 0 to 2 hours, as this would appear to be insufficient time to spend on such an important aspect.

Section C, which measured the usefulness of the program, required response of either very helpful, somewhat helpful, not very helpful or not helpful at all. A response of very helpful scored thirty points; a response of somewhat helpful scored twenty points; a response of not very helpful scored ten points, and a response of not helpful at all scored zero. Thus a score of ten points was given with each degree the program became more beneficial. A possible total score of forty-eight could be acheived in the physiotherapy program by combining scores for section A, B and C.

The range was from 10 to 48. A mean of 43 was established as the cutting point. Those with a score of 43 and above were considered to have received a good physiotherapy program; those with a score of 42 and below were considered to have received a poor physiotherapy program.

In order to measure the quality of counselling received, questions 14, 15, 16, 17, 18, 19 and 20 were designed. Questions 14 A, concerned with the paraplegics ability to return to his former

The second section of the question was concerned with the frequency of contact the patient had with services available. A response of frequent contact received a score of two, as it was felt this indicated interest and a readiness for help on the part of the paraplegic. A response of slight contact received a score of one, as this could indicate less interest. A response of no contact received a score of zero as it was felt that this may indicate disinterest and that counselling, which this study wishes to measure, was not received.

The third section of these questions pertaining to the benefit derived from the services, required a response of either very helpful, somewhat helpful, not very helpful or not helpful at all. A response of very helpful received a score of three as the service was very helpful, a response of somewhat helpful received a score of two; a response of not very helpful received a score of one and a response of not helpful at all received a score of zero, as the service was of no benefit at all. Thus each of the above questions, numbers 14, 15, 16, 17 and 19 could receive a possible score of six each.

Question 18 was concerned with whether services were available in aiding the patient in job placement following discharge from the rehabilitation

center; question 20 with whether contact was continued after his return to the community. Both of these questions required a response of "yes" or "no". A response of "yes" to either question received a score of three, as it indicated that services offered were good and that the rehabilitation process did not end abruptly as soon as patient was discharged. A response of "no" was given a score of zero as it indicated poor services since the paraplegic needs support once in the community again.

A possible score of 36 could be acheived in counselling. The range was 0 to 36. A mean of 12 was established as a cutting point. Those with scores of eleven and below were considered to have received poor counselling. There was a wide range of scores, and thus a mean of 24 was established between those scoring between 12 to 36. This mean was used as a cutting point. Those with scores of 12 to 23 were considered to have received fairly good counselling; those with scores of 24 to 36 were considered to have received good counselling.

To measure the general quality of the rehabilitation program, the scores from the three aspects of a rehabilitation program were combined.

The possible score on the attitude question was 12, physiotherapy 48, and counselling 36. Thus a possible score in the general rehabilitation program was 96.

To find a cutting point between what will be considered a relatively good program and what will be considered a relatively bad program, the means for attitude (9), physiotherapy (43) and counselling (12) were combined. Those with a score of 64 and above were considered to have received a good rehabilitation program and those with a score of 63 and below were considered to have received a poor rehabilitation program. The range of scores was 12 to 88.

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